REMARKS

This is in response to the Office Action of April 16, 2010. Claim 1 is amended to expressly recite that the organic electroluminescent element emits blue light, based upon disclosure throughout the application including that in the Examples and drawings. Claim 1 is also amended to recite the feature of claim 3, and claim 3 is accordingly cancelled, without prejudice. A typographical amendment is made to claim 8. This is a non-narrowing amendment. New claims 10 and 11 are added, based upon such disclosure as that in the paragraph bridging pages 12-13 of the specification. No new matter is introduced by this Amendment. Claims 1, 2, and 4-11 are now pending in the application.

Claims 10 and 11

Regarding new claims 10 and 11, it is pointed out that when excessive light-emitting material is included in the electron-transport layer, the chromaticity is deteriorated – even if a light in the red to infrared region is emitted. This applies especially to light in the red region. Therefore, inclusion of an amount of the light-emitting material in the electron-transport layer in a range of from 0.1 to 10 volume-% with respect to a volume of the electron-transport layer is preferable in terms of chromaticity.

Yamazaki

Claims 1, 2, 5, 8, and 9 were rejected under 35 U.S.C. § 102(e) as being anticipated by US 6,995,509 B2 (Yamazaki). Office Action, pages 2-3. Since this ground of rejection was not applied to claim 3, and since the feature of claim 3 is now incorporated into independent claim 1, this ground of rejection does not apply to the claims in their current form. Moreover, claim 1 as amended hereinabove includes the feature that the organic electroluminescent element emits ***blue*** light. In contrast, the Yamazaki device includes a ***white*** light-emitting element. Yamazaki describes a white organic light-emitting element which has an emission spectrum having peaks in the respective wavelength regions of red, green, and blue. Thus, even through the organic light-emitting element of Yamazaki may include a blue light-emitting material, the organic light-

emitting element as a whole emits white light – due to the mixing of emitted colors. Therefore, Yamazaki does not disclose the subject matter of Applicant's claims.

Toguchi

Claims 1, 2, and 4 were rejected under 35 U.S.C. § 103(a) as being unpatentable over US 6,565,993 B2 (Toguchi). Office Action, pages 4-6. Claim 3 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Toguchi in view of US 6,872,471 B2 (Epstein). Office Action, page 9. Claims 5, 8, and 9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Toguchi in view of Yamazaki. Office Action, page 8. Claims 6 and 7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Toguchi in view of JP 2001-118682 (Toyama). Office Action, pages 6-7. The rejections are respectfully traversed.

On page 5 of the Office Action, the Examiner indicates that Toguchi does not appear to exemplify a device having a fluorescent material in the electron-transporting layer with a wavelength longer than 555 nanometers. However, the Examiner contends, Toguchi teaches that both a DCM compound and perylene are fluorescent materials to be used with a charge-transporting material – citing column 5, lines 26-58 of Toguchi. Applicant points out, though, that the charge-transporting materials listed in column 5, lines 26-58 of Toguchi are the charge-transporting materials **used for the emission layer**. See Toguchi, column 4, lines 9-12. Toguchi neither teaches nor suggests that the charge-transporting materials listed in lines 26-58 of his column 5 could be used in **an electron-transporting layer**.

On page 9 of the Office Action, the Examiner asserts that Epstein teaches in an analogous art that at least one electron-transporting material having a peak emission within the infrared spectrum may be incorporated into a device to achieve an improved device. However, Applicant points out that Epstein is silent regarding the effect imparted by including a light-emitting material having an emission spectrum peak wavelength in an infrared region. Further, Epstein teaches that "**the electron-transporting molecule** may be contained **in the hole-transporting polymer itself**." See Epstein, column 3, lines 11-19. Epstein does not teach or suggest that the electron-transporting molecule described in lines 61-65 of his column 2 could be used in an electron-transporting layer. Epstein neither teaches nor suggests that an electron-transporting

layer could include an electron-transporting material and a light-emitting material having an emission spectrum peak wavelength in the infrared region.

Moreover, the electron-transporting molecule of Epstein has both functions of electron transport and light emission within the infrared spectrum. See Epstein, column 2, lines 61-66. In contrast, an electron-transporting material and a light-emitting material which are separate from each other are included in the electron-transporting layer in the present invention. Therefore, even if the infrared-emitting compound of Epstein is incorporated into the device of Toguchi, the combination of Toguchi and Epstein still fails to provide the present invention.

Neither Yamazaki nor Toyama cures the aforenoted deficiencies of the combined Toguchi and Epstein references. According, withdrawal of all of the rejections of record based upon the Toguchi reference is in order and is earnestly solicited.

Contact information

Please contact Richard Gallagher (Reg. No. 28,781) at (703) 205-8008 with any questions concerning the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

Dated: July 16, 2010

Respectfully submitted,

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